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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/725,979	11/29/2000	Johji Mamiya	JP9-1999-0267US1(8728-457	8978

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EXAMINER

SINGH, DALIP K

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 08/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/725,979

Applicant(s)

MAMIYA ET AL.

Examiner

Dalip K Singh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/12/03
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 5-12, 17-19, 23 and 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 13-16, 20-22, 25 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Response to Arguments

1. This Office Action is in response to applicant's response to restriction requirement dated Jun 4, 2003, in response to PTO Office Action dated May 1, 2003.

2. While PTO recognizing the following attorneys/agents of record in the application #09/725,979: CHAU, FRANK, Reg. No. 34136; BITETTO, JAMES Reg. No. 40513; RANDAZZO, GASPARE J. Reg. No. 41528; DE ROSA, FRANK V. Reg. No. 43584; PAIK, SUSAN Reg. No. 46347, but **fails to recognize Nathaniel T. Wallace (Reg. No. 48,909) as an attorney/agent of record.**

Applicant's response dated June 4, 2003 is non-responsive to the previous request made in the prior PTO Office action for entry of Nathaniel T. Wallace (Reg. No. 48,909) as the agent/attorney of record into the file wrapper for the instant application 09/725,979. Therefore, such recognition is **once again requested** and **required** as soon as possible, this being the **second request** for this matter.

3. Applicant's election with **traverse of Group I (claim nos. 1, 2, 3, 4, 13, 14, 15, 16, 20, 21, 22, 25 and 26)** in Paper No. 5 is **acknowledged**. The traversal is on the ground(s) that claimed subject matter in Group I, Group II, and Group III are all related to image display systems and that subject matter of Group I, Group IV, and Group V is commonly classified in class 345/subclass 530.

This is not found persuasive **because** in the instant case and as stated in prior office action, **invention I (class 345, subclass 555)** has separate utility such as a **host transferring compressed data** without requiring **invention II (class 345, subclass 1.3)** which is about **partitioning a display area** of a display panel; **invention III (class 345, subclass 520)** has separate utility such as a **digital interface** without requiring **invention I** which is about a **host transferring compressed data**; **invention IV (class 345, subclass**

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556) has separate utility such as **managing a window ID** or in other words decoding a window ID without requiring **invention I** which is about **a host transferring compressed data**; **invention V (class 345, subclass 538)** has separate utility such as **transferring image data to display device** without requiring **invention I** which is about **a host transferring compressed data**; **invention II** has separate utility such as **partitioning a display area** of a display panel without requiring **invention III** which is about **digital interface**; **invention IV** has separate utility such as **managing a window ID** or in other words decoding a window ID without requiring **invention II** which is about **partitioning a display area** of a display panel; **invention V** has separate utility such as **transferring image data to display device** without requiring **invention II** which is about **partitioning a display area** of a display panel; **invention IV** has separate utility as **managing a window ID** or in other words decoding a window ID without requiring **invention III** which is about which is about **digital interface**; **invention V** has separate utility such as **transferring image data to display device** without requiring **invention III** which is about digital interface; **invention V** has separate utility such as **transferring image data to display device** without requiring **invention IV** which is about **managing a window ID** or in other words decoding a window ID; **invention III** has separate utility such as **digital interface** without requiring **invention IV** which is about **managing a window ID** or in other words decoding a window ID. See MPEP § 806.05(d).

4. The requirement is still deemed proper and is therefore made **FINAL**.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites in lines 7-11 "...said display includes a panel memory for developing the image..." which would mean panel memory is developing the image; further the claim recites "...develops the image in the panel memory..." which would mean the display is also capable of developing the image for displaying it on its panel. Thus, it appears panel memory as well as the display itself has the capabilities of developing the image and thus is not clear which element "panel memory" or the "display" is first to develop the undeveloped image data; whether the image data is routed to display as well as panel memory at the same time and then how the choice is made to develop the image data. For the purposes of examination, it is understood that a display connected to the host receives undeveloped image data into the panel memory which in turn using processors on the display side develops or uncompresses the image data for display onto the display panel. Appropriate claim 1 language correction/amendment is required.

7. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 4 recites "...host transfers compressed image data to said display as it is compressed...". Does it mean that compressed image data as it is transferred to display is compressed one more time? For the purposes of examination, it will be understood to be compressed data going to display where display using some processing element will decompress this compressed data. In another part of claim 4 limitation, it recites "...said display expands said compressed image data transferred thereto, and develops said expanded image data for said panel memory...", it appears display is expanding compressed image data for panel memory which is quite opposite of the functions of panel memory as claimed in claim 1 where the compressed image data as it is developed in panel memory is bound for display. Does it mean that the display and panel memory both can decompress image data and send the decompressed

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data either way or in other words, display can send decompressed data to panel memory and panel memory can send decompressed data to display? It is not clear which way the data after being decompressed will be sent to. Appropriate claim 4 language correction/amendment is required.

8. The claims and the specifications are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. For example, claim 3 cites in line 18 "...transfers image data showing a fist..." instead of "...transfers image data **having a first...**". Appropriate correction is required.

Similarly, specification at page 21, line 12; page 27, lines 16 either contains spelling or missing reference numeral. At page 25, lines 7-15 talks about Fig. 10 with references to host side 10, panel side 50 but these elements are missing from Fig. 10. Appropriate corrections to the specifications are required.

9. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "...display includes a panel memory for developing the image..." in claim 1 is used by the claim to mean "**processing** of image data", while the accepted meaning is "any memory device is generally used for **storing** the data in the course of processing of data instead of developing the image". The term is indefinite because the specification does not clearly redefine the term.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim(s) 1-4, 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,320,590 B1 to Go.

a. Regarding claim 1, Go **discloses** an image display system (computer system, Fig. 3) comprising: a host (computer body 30, Fig. 3) for executing an application; and display (LCD 40, Fig.) connected to the host (computer body 30, Fig. 3), the display (LCD 40, Fig. 3...information is displayed as picture by means of the LCD 40...col. 3, lines 38-39) displaying an image, wherein said host (computer body 30 and bus compressor 34) transfers undeveloped image data (9-analog signals, col. 3, lines 50-51) to the display (LCD 40, Fig. 3) when the host requests the display to display the image (...the 9-analog signals AMS generated by the bus compressor 34...are transferred to the LCD 40...col. 3, lines 55-62), and said display (LCD 40) includes a panel memory (D-ICs 44 and bus decompressor 46) for developing the image, develops the image in the panel memory (D-ICs 44 and bus decompressor 46, Fig. 3) based on the image data (9-analog signals, col. 3, lines 50-51) transferred from said host (computer body 30, Fig. 3), and displays the image on its panel (LCD 40, Fig. 3), which is developed in the panel memory (D-ICs 44 and bus decompressor 46, Fig. 3). Go does not disclose panel memory as a stand alone function, but developing the compressed data which is coming in the form 9-analog signals from the bus compressor and how the bus compressor 46 and D-ICs 44 work together to decompress or develop the image data, it is inherent that there was compressed data sent from the host side to the display side where it was decompressed or developed for displaying on a display panel making use of the bus compressor 46 and D-ICs which decompressed or developed the data. Go does suggest decompressor 46 to

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be located within each D-ICs 44 which would have been obvious to one of ordinary skill in the art at the time invention was made **because** it reduces EMI as well as makes the system more compact (col. 4, lines 29-35).

b. Regarding claim 2, Go **discloses** wherein said display (LCD 40, Fig. 3) refreshes said panel based on the image developed in said panel memory (D-ICs 44 and bus decompressor 46) (...the video data for one pixel line are distributively and simultaneously inputted to each D-IC 44 the output of which are supplied to the liquid crystal panel 42 to drive the pixels for one line...such operations are repeated for the number of pixel lines, thereby displaying a single image...col. 4, lines 16-22).

c. Regarding claim 3, Go **discloses** wherein said host (computer body 30, Fig. 3) transfers image data showing a first resolution (9-analog signals) to said display (LCD 40, Fig. 3) based on an output from an application executed with the first resolution (9-analog signals), and said display converts said transferred image data having the first resolution (9-analog signals) to that having a second resolution (18-bit) higher than the first resolution, and develops said image data for said panel memory (D-ICs 44 and bus decompressor 46). See col. 3, lines 50-67; col. 4, lines 1-5.

d. Regarding claim 4, Go **discloses** wherein said host (computer body 30, Fig. 3) transfers compressed image data (9-analog lines) to said display (LCD 40, Fig. 3) as it is compressed, and said display (LCD 40) expands said compressed image data (9-analog lines) transferred thereto, and develops said expanded image data for said panel memory (D-ICs 44 and bus decompressor 46)(...the D-ICs 44 ...receive the decompresses video data...the output of which are supplied to the liquid crystal panel 42.

e. Regarding claim 13, it is similar in scope to claim 1 above and is rejected under the same rationale.

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- f. Regarding claim 14, it is similar in scope to claim 3 above and is rejected under the same rationale.
 - g. Regarding claim 15, it is similar in scope to claim 2 above and is rejected under the same rationale.
 - h. Regarding claim 16, it is similar in scope to claim 3 above and is rejected under the same rationale.
12. Claim(s) 20-22 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,320,590 B1 to Go in view of U.S. Patent No. 6,446,155 to Maggi et al.
- a. Regarding claim 20, Go **discloses** an image display device comprising: a panel (LCD 40, Fig. 3) for displaying an image; image data receiving means (bus decompressor 46, Fig. 3) for displaying an image for receiving undeveloped image data (9-analog signals) from a host side (computer body 30, Fig. 3) which executes a plurality of applications; a panel memory (D-ICs 44, Fig. 3) for displaying an image for developing said image data (9-analog signals) received from said image data receiving means (bus decompressor 46, Fig. 3); and panel control means (controller 48) for developing image data (9-analog signals) for said panel memory (D-ICs 44, Fig. 3). Go **is silent about** performing a color adjustment for each image data. Maggi et al. **discloses** a video pipeline block of a computer system where image data is processed, specifically, compressed, encoded, color corrected, gamma corrected etc and the decompressions of data can be done in accordance with Huffman, differential parse code modulation etc (col. 4, lines 7-37). Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify Go with the feature "color adjustment" as taught by Maggi et al. **because** it provides a flexible means to color correct data.

b. Regarding claim 21, Go **discloses** an image display device comprising: a panel (LCD 40, Fig. 3) for displaying an image; image data receiving means (bus decompressor 46, Fig. 3) for receiving image data; a panel memory (D-ICs 44, Fig. 3) for developing said image data (9-analog signals) received from said image data receiving means (bus decompressor 46, Fig. 3); a panel memory for developing said image data received from said image data receiving means; and panel control means (controller 48) for developing image data (9-analog signals) for said panel memory (D-ICs 44, Fig. 3). Go **is silent** about reception of color image data of the first number of bits and monochrome image data of the second number of bits different from the first number of bits from a host side (computer body 30). Maggi et al. **discloses** a video pipeline 400 where captured data can be an 8-bit format, a 10-bit format etc. (col. 5, lines 54-67; col. 6, lines 1-46). Since Maggi et al. **suggests** different data formats, it is inherent that color image data of the first number of bits and monochrome image data of second number of bits different from the first number of bits from a host side is also suggested. Specifically, color and monochrome data, in general, have different number of bits. Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify the “controller 48” of Go with the feature “adaptability to different data formats of the video pipeline 400” as taught by Maggi et al. **because** it would make the image display device to be efficiently and easily adapted to a variety of modes (col. 2, lines 33-40).

c. Regarding claim 22, Go **does not disclose** said panel control means writing identification bits for discriminating between said color image data and said monochrome image data, and executes a developing processing based on the identification bits. Maggi et al. **discloses** a video pipeline manager 424 that can provide a selection signal (not shown) to the video multiplexer 420 to indicate which one

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of the inputs to the video multiplexer 420 should be selected. Maggie is, therefore, suggests a selection mechanism for incoming video data. The video multiplexer thus is controlling the input based on video pipeline manager 424 control signals. The control signals thus are similar to the identification bits for discriminating between color or monochrome image data. Maggie while does not write the identification bits but nonetheless provides a way to sort incoming video data. Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify the "controller 48" of Go with the feature "video multiplexer under the control of video pipeline manager for selection of inputs to the video multiplexer" as taught by Maggi et al. **because** it provides an efficient way to distinguish between different image data i.e., color and monochrome.

13. Claim(s) 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,320,590 B1 to Go in view of U.S. Patent No. 5,784,035 to Hagiwara et al.

a. Regarding claim 25, Go **discloses** transferring image data showing a first resolution executed by said application from said host (computer body 30) to said display (LCD 40, Fig. 3); scaling the image data showing the first resolution by said display (LCD 40, Fig. 3) which is transferred from said host (computer body 30); developing an image with a second resolution different from said first resolution (See Go col. 3, lines 50-67; col. 4, lines 1-5). However, Go **is silent** about outputting the image to a panel of said display so as to display the image on the panel. Hagiwara et al. **discloses** a large screen display apparatus where local screens 12a to 12d constitute a single screen 12 for displaying the screen image on the basis of screen data. The data processing sections 14a to 14b, each connected to one of the respective displays for generating local data and selectable on the basis of screen data (col. 3, lines 60-67; col. 4, lines 1-11). Therefore, it would have been obvious to a person of ordinary skill in the art

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at the time invention was made to modify Go with the feature "plurality of display panel on a display screen each controlled individually by data generating sections for generating local data of a partial screen image to be displayed on the corresponding local panel on the basis of screen data" as taught by Hagiwara et al. **because** this way load on the processing circuit, transmission of data and processing of data is handled more efficiently providing for better performance for a large screen display apparatus.

b. Regarding claim 26, Go as modified by Hagiware et al. **discloses** wherein said display is a multi-panel obtained by tiling a plurality of panels or a high-resolution panel and scaling of said image data is an enlarged display (col. 3, lines 60-67; col. 4, lines 1-11).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following prior art teach image display system with plurality of display screens, resolution conversion, parallel processing, display memory.

U.S. Patent No. 6,266,042 B1 to Aratani

U.S. Patent No. 5,923,339 to Date et al.

U.S. Patent No. 6,545,683 to Williams

U.S. Patent No. 6,486,865 B1 to Ishiyama

U.S. Patent No. 6,384,807 B1 to Furuhashi et al.

U.S. Patent No. 6,222,886 B1 to Yogeshwar

U.S. Patent No. 5,406,306 to Siann et al.

U.S. Patent No. 6,064,771 to Migdal et al.

U.S. Patent No. 6,097,364 to Miyamoto et al.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Dalip K. Singh** whose telephone number is **(703) 305-3895**. The examiner can normally be reached on Mon-Thu (8:00AM-6:30PM) Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Matthew Bella**, can be reached at **(703) 308-6829**.

Any response to this action should be mailed to:

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Commissioner of Patents and Trademarks

Washington, D.C. 20231

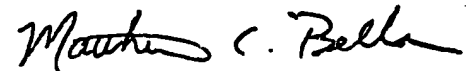
or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

dks

August 23, 2003



MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600